

A review by the Federal Reserve Bank of Chicago

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Business Conditions

1960 May



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THE Trend OF BUSINESS

During April, the business and financial news continued to be spotted with after-effects of the steel strike in the second half of last year and an unusually severe late winter in most parts of the country. Several economic yardsticks indicated that activity slowed somewhat in March, but there was a widespread tendency to believe that the unfavorable news reflected primarily temporary forces.

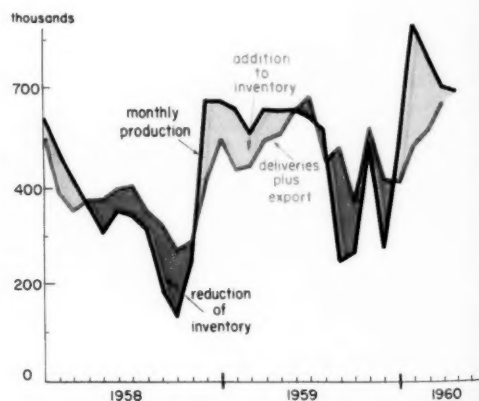
Total industrial production declined, as it had in February, mainly because of cut-backs in steel and autos. Manufacturers' new orders slumped in some lines as individual firms attempted to hold inventories to minimum levels. Construction activity declined, interrupting a rise which had begun in November. Moreover, total employment was reduced and unemployment rose.

Despite these adverse signs, business sentiment remained mildly optimistic and perhaps has improved in recent weeks. No general letdown in activity, affecting virtually all lines, was thought likely to develop. Spring-like temperatures and the Easter season produced more favorable readings on some business barometers, and there was a tendency to interpret this as the beginning of a further rise from the recent high levels of employment and output. With significant amounts of unused capacity in basic industries, output could rise somewhat, if warranted by demand, without pressing so strongly upon available resources as in "prosperous" years of the recent past.

The improvement in business sentiment was reflected in the financial markets. Average stock prices, which had dropped sharply in January and February, recovered somewhat in March and early April; and the decline in interest rates, in part a reaction to the very high levels reached last year, was reversed, at least temporarily, in April.

The impact on activity of below-normal temperatures and heavy snows followed by sudden thaws and floods was widely recognized. In addition, it was generally understood that some decline in steel and auto production from the high January rates was inevitable sooner or later. The fact that it came sooner rather than later was unsettling,

New car deliveries mount as production is cut back



Note: Data are adjusted for working and trading days.

but it was also believed that the adjustment was largely accomplished by mid-April.

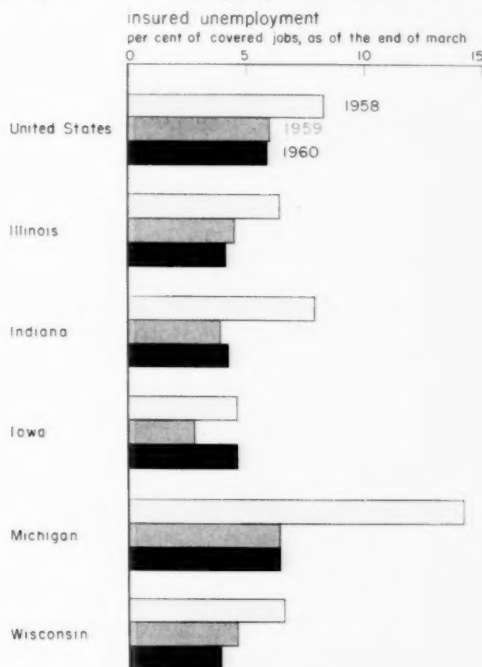
Steel officials have revised production estimates for 1960 downward from 130 million tons or more at the start of the year to about 120 million tons. In the first quarter, about 35 million tons were poured. By April, output had declined to a quarterly rate of approximately 30 million tons. With allowance for vacation shutdowns in the third quarter, the new rate—about 80 per cent of capacity—might be maintained through the remainder of the year in the view of industry analysts.

Many users of steel, copper and aluminum are reported to be operating with relatively small inventories, counting heavily upon prompt delivery to maintain production schedules. Should an appreciable rise in consumer buying occur in the second quarter, it is possible that stocks of some users would not be sufficient to support desired levels of operation and new orders would rise.

Another element inducing business confidence is the fact that periods of hesitancy have been sandwiched into each of the post-war upswings. This happened in 1947, 1951 and 1956. Not all periods of sagging or stable output, therefore, mark the beginning of declines in activity. The most recent experience of this type was in the spring of 1956. At that time, industrial production declined, inventory accumulation slowed down, retail and producer sales were less than vigorous and the economy as a whole gave evidence of stability or decline. However, these warnings of an incipient recession proved to be a year and a half premature.

The points outlined above might be considered unconvincing in the face of the reluctance of consumers to boost spending apace with their higher incomes in the first quarter of the year. However, in late March

Most Midwest states have a smaller proportion of unemployed than the U. S.



Note: Includes temporary unemployment programs during 1959; excludes railroad workers.

and early April, purchases of consumer goods improved markedly (see pp. 4-6).

Employment and unemployment

Doubtless the most disappointing development of the spring was the fact that the rise in employment and the decrease in unemployment which followed the ending of the steel strike were reversed in March. Non-farm wage and salary employment, seasonally adjusted, which had risen 950,000 between October 1959 and February 1960 dropped about 200,000 in March.

Unemployment increased from 4.8 per

cent of the labor force in February to 5.4 per cent in March. This development was influenced by the fact that the data are based on a survey made in the week beginning March 7 when weather conditions were particularly unfavorable. Even parts of the "Deep South" were blanketed with snow.

In the United States and each of the states of the Seventh Federal Reserve District, new claims for unemployment compensation had been running below the year-ago number in January and February. In March, claims were appreciably higher and, although declining in early April, were still above the year-ago number.

The Department of Labor confidently predicted that a vigorous reversal of the labor market trend in March would be apparent in April. Snows and floods in March had impeded consumer purchases and the movement of goods between business firms and had a particularly strong adverse impact on agriculture and construction. The decline in construction employment between February and March was about equal to the decline in total employment.

It should be noted that the sluggishness

in economic activity during the spring varied greatly by areas, industries and even firms within industries. In general, the durable goods manufacturers have accounted for most of the layoffs and shortening of the average work week in manufacturing. Nevertheless, Wisconsin—an important producer of durable goods—has a relatively strong employment situation. In March, 24 of the 149 major labor market areas in the nation were estimated to have less than 3 per cent unemployment. All 4 of the Wisconsin centers classified by the Department of Labor—Milwaukee, Madison, Racine and Kenosha—were in this category. Iowa also showed up well with both classified centers in Iowa—Des Moines and Cedar Rapids—in this group.

The relatively favorable employment situation in Wisconsin, Iowa, Illinois and Indiana is indicated by the accompanying chart showing the proportion of covered workers receiving unemployment compensation payments in late March. Only Michigan, among District states, had higher unemployment than the national average, as has been the case for several years.

Easter sparks retail sales rise

Retail sales during the first quarter of 1960 were rather unspectacular and, hence, proved disappointing to those who had expected the new decade to open with a burst of consumer spending. Nevertheless, the nation's retailers rang up total sales in excess of 18 billion dollars during each of the first three months—2½ per cent above the com-

parable period last year. This modest gain, moreover, was realized in the face of unusually severe weather in February and early March in many regions and a late Easter—April 17 this year, compared with March 29 last year.

The eventual arrival of "springlike" weather toward the end of March and a brisk

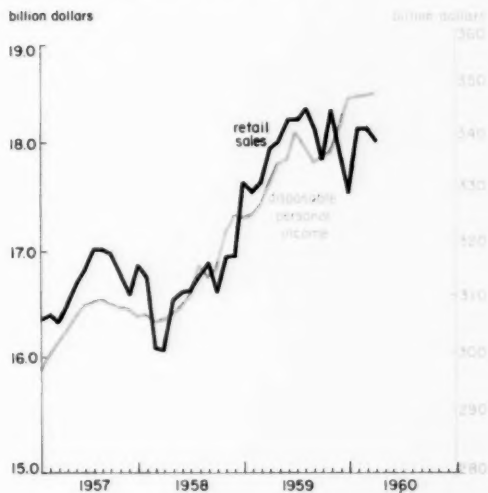
movement of Easter merchandise in the first half of April produced sales more in line with earlier expectations. Retailers and many other business analysts, always sensitive to indications of possible shifts in consumer spending, were quick to place a favorable interpretation on the pickup in sales. Consumers, it was said, were not averse to spending more nearly in step with the higher flow of personal income, but were not so insistent upon doing so as to battle the elements in order to lighten their purses. Retailers reported that sales in April had a better "tone" than at any time in recent months.

Department stores in the Midwest reported sales 11 per cent above last year in the four weeks ended April 16. If adjustment is made for the difference in Easter dates, six-week sales for the 1960 season still show a 4 per cent gain over last year, for a new record high. Furthermore, the pickup in sales at department stores was not limited to Easter finery. Even during the adverse weather in February and March, substantial increases were reported in sales of "big-ticket" items such as radios, televisions and major household appliances.

The automobile sector provided further evidence of an upturn at retail. Sales of new cars rose in the last ten days of March and during the first third of April averaged 20,000 per day, a gain of 11 per cent over the same period in 1959. Auto producers were encouraged by the step-up in deliveries, and the record inventory of 1-million-plus domestically produced new cars on April 1 appeared less formidable than had been indicated earlier. Similarly, any fears that stocks at department stores had become too ample, notably in the apparel and accessories lines, were largely dispelled by the recent sales surge.

Food store sales, which account for nearly

Retail sales have not kept pace with income



one-quarter of total retail sales, rose slowly during the first quarter, exceeding last year's volume by about 3 per cent. Recent sales of Midwest food stores give evidence of continued gains, not fully accounted for by higher prices.

Retailers of automotive products—including both new and used cars, tires, parts and accessories—exceeded their first quarter 1959 sales by a smaller margin than either food or department stores—about 2 per cent. Sales totals, however, were up sharply from the last quarter of 1959 when new car shortages, resulting from the steel strike, caused a significant slump. The marked difference between the modest percentage increase in sales of automotive stores and the substantial rise in the number of new cars stems largely from two factors: the success of the compact cars and the trend toward less fully equipped models have resulted in a lower average price per unit. Credit sales

of new passenger cars in February accounted for 58 per cent of the total number sold at retail, unchanged from the February 1959 ratio.

Sales outlook

If the recent rise in sales should prove to be temporary, it would be clear in retrospect

that it was attributable to weather, the late Easter and a catching up on purchases postponed in the winter. Business prospects, then, would be due for a searching reappraisal. But if consumers were to carry out their plans as revealed in recent surveys of buying intentions, the strengthening of retail sales would continue beyond the spring.

The Seaway—year one in review

The St. Lawrence Seaway, icebound since December, was reopened in mid-April. Both the Seaway officials and members of the shipping industry predict that this season's tonnage on the water link between Great Lakes ports and the Atlantic Ocean will be up substantially from the volume last year.

While 1960 is only the second year of operation for the Seaway, a water route between Montreal and Lake Ontario has been in use since before the Civil War. The present Seaway is essentially a 471 million dollar "face lifting" of the old waterway. With deeper and wider canals and longer locks, the Seaway allows larger, more efficient lake and ocean ships to travel between Great Lakes ports, Montreal and the Atlantic Ocean.

The old waterway

Since the early nineteenth century, United States and Canadian efforts have been directed toward the removal of navigational barriers in the channels connecting the Great Lakes and the St. Lawrence River. Originally, the system was not a natural waterway.

Lake Michigan, for example, is about 600 feet above sea level, and the watercourse does not fall gently to the ocean but sharply in a series of falls and rapids in the connecting channels and the St. Lawrence River.

Before the Civil War, a 9-foot channel between the Great Lakes and the Atlantic Ocean was completed. Through the years, both the United States and Canada have continued to deepen the channels and improve the system of locks to accommodate the larger lake ships. By 1903, ships requiring as much as a 14-foot depth could traverse the entire length of the waterway.

Vessels plying the Great Lakes ports were designed to navigate the shallow connecting channels and carry a maximum tonnage of bulk cargo (materials which can be shoveled, pumped or blown such as grain, coal and iron ore). "Lakers" traveled as far as Buffalo where the cargo was reloaded for shipment by way of rail or the Erie Canal and the Hudson River to Atlantic Coast ports. "Canallers," shorter and narrower than the lakers, moved cargo over the old St. Law-

1959 shipping at U.S. ports west of the Welland Canal was dominated by products from mines and farms (tonnage through Welland Canal only)

TO Canadian ports

6,551,549

1,432,032

399,641

1,015

—

2,715

8,386,952

mine products

agricultural products

manufactures

forest products

animal products

unclassified cargo &
package freight

total

FROM Canadian ports

6,042,523

8,910

698,497

83,106

5,162

10,939

6,849,137

TO other foreign ports

34,684

2,191,703

61,772

1,867

103,488

356,462

2,749,976

mine products

agricultural products

manufactures

forest products

animal products

unclassified cargo &
package freight

total

FROM other foreign ports

78,310

9,744

370,609

17,024

12,673

511,145

999,505

rence Canal to Montreal where it was loaded on large ships bound for overseas ports.

Ocean-going vessels began to appear at Great Lakes ports in the 1920's, and after World War II used the shallow waterway in increasing numbers. These ships, limited in cargo capacity by the size of locks and canals and the depth of the waterway, loaded to about half of capacity at lake ports and after reaching Montreal took on additional cargo. This was a relatively inefficient operation forcing these vessels to carry only high-class general cargo (cargo requiring individual handling such as automobiles, tools, agricultural equipment and construction machinery). The depth of the locks and canals

and the construction of the keels of these ships made it impossible for them to carry profitably the high-density bulk cargo which constitutes a large part of the total tonnage moved on the waterway.

The new Seaway

A much deeper channel was needed if the more efficient larger ships were to be used and if a "true" seaway to Great Lakes ports was to be available. In 1954, after years of fluctuating interest, the United States joined with Canada in the development of a deep waterway. The United States had been sparked to action by statements of the Department of Defense that the seaway was

essential to national defense, by the realization that high-grade iron ore in the Mesabi was rapidly being depleted and large amounts of Labrador ore would be required and by the realization that an all-Canadian seaway would not allow the United States to participate in setting tolls and traffic regulations.

Last year, the St. Lawrence Seaway between Lake Ontario and Montreal and the deepened, improved Welland Canal were officially opened. Ocean-going ships carrying 8,500 tons of cargo, over 5 times more than before, and lakers handling 25,000 tons of bulk cargo could now be accommodated.

While other connecting channels have been improved and are capable of handling most of the vessels passing through the Seaway, some additional work is needed before all channels will equal the 27-foot depth of the St. Lawrence Seaway proper. Nevertheless, on the eve of its second year, the water route is for all practical purposes a seaway.

A success in the first year?

During the 1959 shipping season, over 3,330 ocean and lake vessels used the Seaway. Over one-third of these vessels, carrying 60 per cent of total Seaway tonnage, could not have passed through the old St. Lawrence Canal.

Elimination of the need for much of the transshipment at Buffalo and Montreal was expected to provide lower-cost transportation between ports in Canada, the United States and abroad. It was believed that the lower costs would increase traffic both by generating new cargo tonnage previously not moved to foreign ports and by diverting cargo from other kinds of carriers.

However, cargo traffic in 1959, through both the Welland Canal and the St. Lawrence, was below earlier predictions. The late spring thaw, the steel strike after mid-year,

the decline in Canadian grain exports, the general sluggishness of United States exports and delays and congestion at ports and locks all tended to reduce traffic. In addition, lake ports were not adequately prepared to handle the large number of ocean ships, the Welland Canal was a traffic bottleneck because of inadequate mooring facilities, and ship captains in the unfamiliar waters of the inland canals and lakes found navigation difficult.

However, total traffic on the improved waterway did exceed that of earlier years. At the Welland Canal, bypassing Niagara Falls, the 27.4 million tons of cargo was 29 per cent more than in 1958 and 22 per cent above the 1957 volume. On the last link with the Atlantic Ocean—the St. Lawrence Seaway—traffic rose to 20.6 million tons, 75 per cent more than in 1958.

While lake vessels carried almost 70 per cent of total Seaway tonnage, most of this was bulk cargo—iron ore from Canadian mines for steel mills in the United States and Canada; grain from the “lakehead” for milling and transshipment at Quebec and Montreal; and other cargo, such as rough and crushed stone, pulpwood and coal, between various United States and Canadian ports.

About a thousand ocean-going ships carrying both general and bulk cargo and passengers came up the Seaway. A million tons of cargo originating abroad, about three-quarters of which was general cargo, reached United States ports on the Great Lakes.

Only one-half million tons of general cargo originating in the United States moved from Great Lakes ports to foreign ports. In part, this was because United States exports in 1959 were generally below 1958 and because delays and congestion at ports and locks caused some shippers to avoid using the Seaway. However, with the deepened channel, ocean-going ships were able to load

Great Lakes and the St. Lawrence Seaway



2.2 million tons of bulk cargo at United States ports for shipment abroad. This reduced the amount of transshipment that otherwise would have been necessary at Buffalo and Montreal. Grain shipments from Buffalo, for example, were only 73 million bushels in 1959 in contrast to the 25-year annual average of 135 million bushels.

The lower shipping costs, resulting from larger vessels and reduced transshipment, caused some cargo to be diverted from other carriers. Part of the cargo which formerly moved by rail to Atlantic ports for shipment overseas was shipped direct from lake ports via the Seaway. The number of freight cars arriving at North Atlantic ports carrying

goods for export declined 17 per cent between 1958 and 1959, in contrast to only a 3 per cent decline in arrivals for all major United States ports.

With cargo tonnage in 1959 below earlier predictions, toll revenues from the Seaway were also below estimated levels. However, Seaway authorities have stated that success, from a financial point of view, seems reasonably assured and there is no need to consider an increase in tolls.

The United States share of the cost of the 471 million dollar Seaway, including interest during construction, is estimated at 131 million and was financed by borrowing from the United States Treasury. The Seaway Corporation as a self-sustaining and self-liquidating enterprise must charge tolls sufficient to cover all operating and maintenance costs, payments of interest and repayment of bonded debt within a period of 50 years. The United States share of revenues for 1959 was 3.2 million dollars. This was sufficient to pay all operating costs and return over 2 million to the Treasury. Although the 1959 revenues would not meet the required 50-year repayment schedule, Seaway authorities expect that after a development period traffic will increase sufficiently to provide adequate revenues to meet debt requirements.

At Seventh District ports

Some Great Lakes ports made impressive showings in total volume of cargo handled last year. Over 2 million tons of the cargo passing through the Welland Canal and the St. Lawrence Seaway was loaded or unloaded at Chicago. Included in this figure was a large increase in trade with foreign ports. Chicago's water-borne exports in 1959 increased almost 170 per cent over the preceding year, while her imports increased 117 per cent. Also, as in the past, Chicago was

the most important port on the Great Lakes in terms of general cargo handled, and the volume of this type of cargo increased significantly with the opening of the Seaway. Almost 8,000 freight cars containing general cargo arrived at the Chicago port last year, in contrast to 2,400 arrivals in 1958.

In the Seventh Federal Reserve District, Detroit, Milwaukee and Muskegon also ranked among the top 15 United States ports in total cargo tonnage handled. While the tonnage of many United States and Canadian ports consisted largely of bulk cargo, general cargo was important at a number of ports. The leading ports for general cargo included, in addition to Chicago, Toronto, Detroit, Cleveland, Thorold, Canada and Milwaukee, in the order named.

What about year two?

Estimates for traffic on the Seaway in 1960 range from 25 to 29 million tons, compared with 20.6 million tons in 1959. Bulk cargo, likely to retain its 1959 share of 90 per cent of total tonnage, is expected to account for most of any increase in traffic. With the steel strike over, shipments of iron ore from Labrador to United States and Canadian mills should be significantly above last year. But how much higher will depend upon activity in the "lakeside" steel centers.

Prospects for increases in general cargo are also reported to look good. Seaway authorities are hopeful that the experience gained by shipmasters and port officials will mean faster service this year and that shippers who had been discouraged by the delays at ports and locks during the first season will have less grounds for complaint in the current season. Congestion at the Welland Canal should be reduced. Over 3 million dollars was spent during the past winter to improve that facility. Most of the

ports along the Seaway are extending and improving their dock facilities to accommodate ocean-going ships.

Competition from other modes of transport may be sharpened somewhat. During the early part of the Seaway's first season, the railroads attempted to recoup traffic by reducing rates on grain moving to Atlantic ports by 20 to 25 per cent. Most lake ports, except Duluth, felt the impact of the railroads' rate cut. Because of its location at the "head" of the Great Lakes and the long railroad haul to Atlantic ports, shipments from Duluth were relatively unaffected, and that port provided a large part of the 120 million bushels of grain that passed through the Seaway.

The railroads are now considering the possibility of lowering rates on some items of general cargo. If reductions in these rates

are made and prove as successful in diverting cargo from the Seaway as were the rate reductions for grain, some of the potential traffic gain foreseen for the Seaway may not materialize.

Even without a lowering of rail rates, the spread between rates on direct water transport to overseas ports and on the rail-ocean combination will be reduced. Ocean freight rates on cargo to some European ports will be higher this year than last. With this narrowing of rates and fewer delays in Seaway shipping, lines that found the first year's operation unprofitable may have a better experience in 1960. Even aside from the rate question, however, shippers who require rapid cargo movement and those who find that shifting between different kinds of transport at different seasons is onerous will not be attracted to the Seaway.

Projecting economic growth

The nation's output of goods and services was at an annual rate of about 500 billion dollars during the first quarter of 1960. By 1965, output may reach 600 billion dollars and, by 1970, 800 billion, even assuming no rise in prices, according to estimates of one private organization which specializes in such projections. Numerous other organizations and individuals have made similar projections.

Reflecting the preoccupation with growth, persons responsible for planning the affairs of business firms, governmental bodies and even households have become interested increasingly in long-range projections of eco-

nomic activity. Business forecasts covering the next six months or the next year are sufficient for short-run decisions pertaining to production and purchasing, but such forecasts do not provide a helpful guide in deciding whether to go ahead with construction projects or other programs which will "pay out" only after the passage of a considerable number of years. Many persons responsible for such planning are not satisfied with general statements that the future looks good, that we have entered the "sizzling Sixties" or that serious recessions are likely to be avoided in the future. Rather, they desire projections in the form of specific fig-

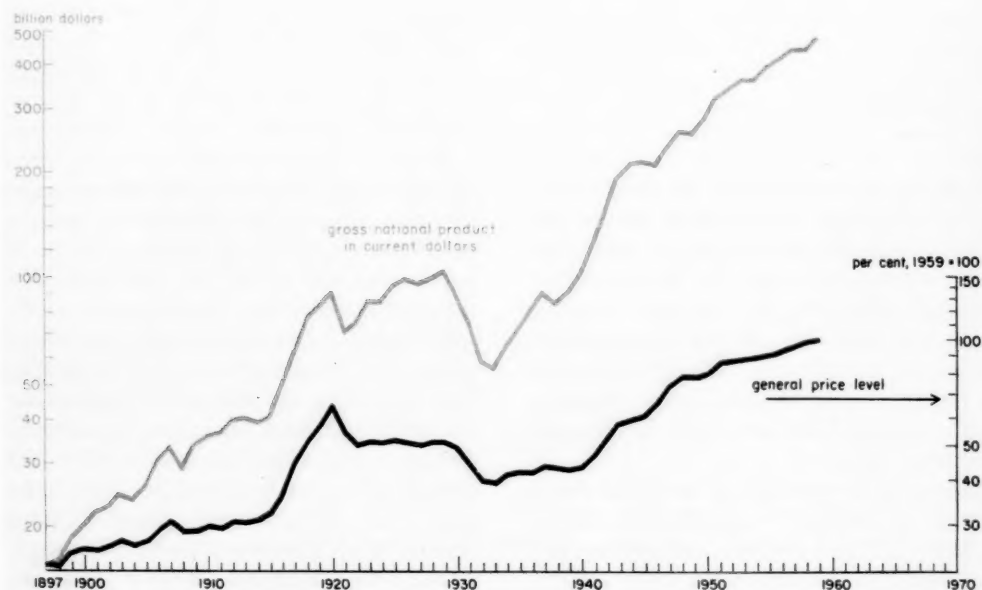
ures which can be adapted to particular areas and lines of activity.

Although projections of the nation's economic potential five, ten or twenty years into the future are receiving more intensive study than ever before, the idea is not new. In the late Twenties, efforts to peer far into the future were fairly common and, then as now, the conclusions were highly optimistic. But the Great Depression of the Thirties directed the attention of economic analysts toward the problem of preventing deep and long-continued declines in activity. There was a tendency to settle for "stabilization," to iron out the hills and valleys of the business cycle. This sentiment was still very

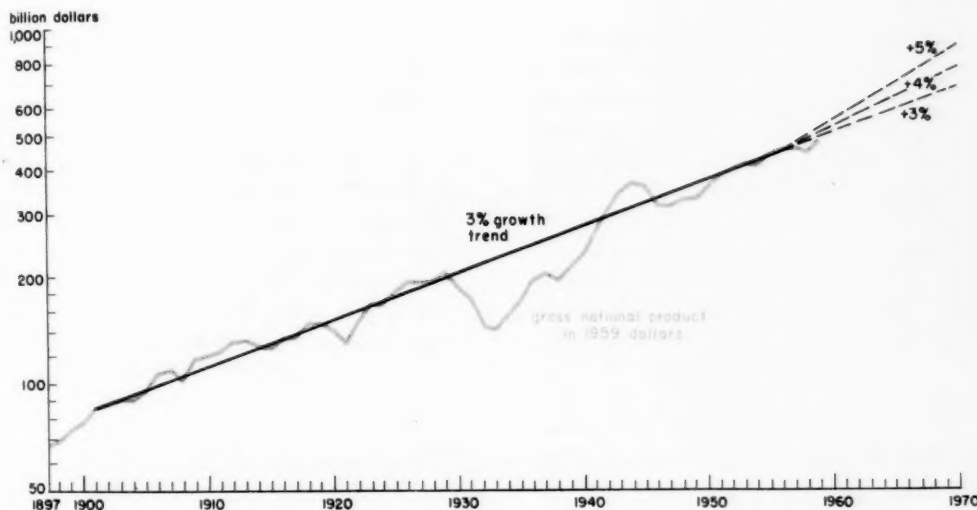
much in vogue at the close of World War II. A sizable reduction in activity from wartime levels was widely anticipated at that time. But experience with the mild readjustment just after the war and in 1948-49 offered persuasive evidence that the postwar economy had strong footings. As a result, emphasis shifted to maximization of the nation's growth potential rather than to merely preventing declines.

Projections made in the late Forties and early Fifties were too low in most cases because of the cautious assumptions upon which they were based. Goals expected to be realized ten years hence were reached and surpassed in much shorter periods. Busi-

The huge increase in the value of output during the 20th century has resulted in part from higher prices



Adjusted for price changes, growth has averaged 3 per cent per year



nessmen, government officials and consumers alike were heartened by this evidence that the economic mechanism might continue to perform smoothly enough to maintain activity close to the ever-rising ceiling set by over-all capacity.

Total spending—the yardstick

Current estimates of the total output of goods and services are prepared each quarter by the Department of Commerce and reported as the gross national product. The approach used is to aggregate outlays by the three broad groups of spenders—consumers, businesses and governments. To avoid double counting, only spending on final products is included, except for the additions to business inventories. In the case of foreign trade, exports are netted against imports. Any excess of exports over imports adds to

the gross national product. Similarly, any excess of imports must be subtracted from the total in order to measure the nation's output.

Until recently, the official gross national product series were available only since 1929. Now, official estimates have been made covering the period 1909 to 1928. In addition, some individuals and private agencies have prepared estimates extending back into the nineteenth century. Needless to say, the foundation for such estimates becomes increasingly shaky the further back one goes.

Most projections of the probable size and level of activity at some future time are based upon this record of the past performance of the American economy. In large degree, the estimates for several years hence are derived by projecting the rate of increase during the past decade or longer.

Projections of components of the gross national product covering several years are seldom offered with any large degree of confidence as to their probable accuracy. Projections of the gross national product as an aggregate are considered feasible because it is assumed that output will be closely related to the nation's over-all capacity to produce. While the analyst can assign a share of the estimated total to the governments, for example, in a future target year, this can be done only by making arbitrary assumptions about such things as the state of the cold war at that time and the response to the ever-present demands for additional government services. Usually the difficulties are bridged over by an assumption that there will be no great change in the proportion allotted to the military and possibly to other public uses, despite the fact that these proportions have fluctuated substantially since the end of World War II.

The share of total output applied to business investment in facilities and inventories in some future year is less difficult to project than government purchases. But breakdowns between plant and equipment and between types of equipment are seldom attempted. Similarly, consumer spending may show a substantially different mix than at present. The regional breakdown of total outlays for goods and services involves another thorny problem. Yet these specifics must be estimated if most types of decisions are to be aided by projections of economic activity.

Factors in making projections

A nation's ability to produce is determined by three elements. In economic textbooks these are described as the "factors" of production—land, labor and capital. The first covers the extent and quality of natural resources. The second relates to the size of the

labor force (including management) and the quality of the workers. The third includes all types of man-made capital facilities such as roads, buildings, machinery and equipment, as well as the contributions of "technology."

To some extent, natural resources such as farm and forest land can be improved through careful management, but the general tendency is for natural resources to become more expensive to exploit as the richest resources are utilized first. This is certainly the case for minerals. Nevertheless, these problems are offset in large degree by improvements in equipment and techniques. As a result, projections of growth usually make no allowance for the deterioration in the quality of natural resources.

The contribution of man power to production totals is largely determined by the number of persons of working age who have jobs, the length of the average work week and the extent of vacations, and the skills of management. It is also influenced by the adequacy of workers' training and their interest in performing well.

The last of the factors, capital goods, has permitted increased output per worker, even though the quality of natural resources has declined and the work week has been shortened. Projections of further increases in output per hour of human labor assume more and better capital goods in the future.

The number of persons of working age is known well in advance, barring some catastrophe. All of the persons who will be fourteen years or older (usually taken as the lower limit of the working age group) are known within fairly narrow limits for the next fourteen years. However, allowance must be made for such factors as further lengthening of the average period in school, further lowering of the average age of retire-

ment and changes in the proportion of women working. In addition, it is necessary to estimate the size of the armed forces, the extent of unemployment and the effects of further shortening of the work week.

There are, obviously, many unknowns to be evaluated before arriving at a total of probable labor input at some future date. It is perhaps even more difficult to deal with the element of productivity. Although the long-run trend has been for higher output per worker and even greater increases per hour worked, these changes have been irregular. Productivity increases have tended to appear in spurts in the early stages of business recoveries such as late 1958 and early 1959.

Since 1900, *output* per worker is estimated to have risen by about 2 per cent per year. During the postwar decade, it has risen somewhat faster—about 2½ per cent per year. Over the entire fifty-year period, the increase in the *number* of workers has averaged about 1½ per cent per year. The growth in total output, the product of these two factors, has averaged about 3 per cent per year since the start of the century and about 3.6 per cent per year during the postwar decade.

Most investigations of growth possibili-

ties reach the conclusion that increases in total output in the future are likely to be close to the rate noted in the postwar period thus far. Such projections assume that no major war or serious depression will occur. Some persons and organizations suggest that a 5 per cent growth rate is possible for the future because of expected great improvements in technology. Others, while agreeing that such a rate is feasible for short periods, express serious doubt that it would be sustainable.

Few, if any, of the persons developing projections of economic activity would suggest that business fluctuations will no longer occur. They merely support the idea that a reasonably full employment of men and facilities can and probably will be maintained over the years. Should another depression like that of the Thirties develop, such projections will fall wide of the mark.

Production foregone in a long depression, for the most part, is lost forever. Certainly this is true of unused man-hours. Especially important are the unused man-hours and facilities in the capital equipment industries where spending is restricted sharply during a period of depressed activity. Some of the deferred investment in capital equipment may be "made up" in a surge when the revival occurs, but not all of it. Moreover, capital funds are timid during a period of low profits or deficits, with the result that ingenuity is less likely to be encouraged and new product development is less vigorous.

Although it is quite possible that major depressions will be avoided in the decades to come, assuming adequate restraint during periods of excessive exuberance, moderate recessions can be expected to occur from time to time. This fact points up the need to regard projections for target years only as approximations of the totals which may pre-

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vail about that time. For example, if the 3.6 per cent annual increase had been applied at the end of 1953—a year of relatively full utilization of resources—a 23 per cent increase in gross national product would have been projected for 1959. However, the latter year featured recovery from a moderate recession, while the former was the last in a series of years of sharply rising defense expenditures related to the Korean war. As a result, output in 1959 was 15 per cent above 1953.

The purchasing power problem

In a given year, one can accept the gross national product as an aggregation of the output of a vast variety of goods and services which uses the dollar as a “universal measuring cup.” But comparisons of dollar expenditures between years involve the problem of changes in prices of particular items and in the over-all price level. This is why growth trends estimated for the past and projected for the future are always offered in terms of “constant dollars.” For the past, this means that the data are adjusted upward or downward through the use of price indexes in an attempt to eliminate the effects of deflation or inflation. For the future, it means that there is no allowance for possible price changes from the point at which the projection begins.

One great problem involved in attempts to measure economic growth over a considerable number of years, either in the past or in the future, concerns changes in the kinds of goods and services offered in the market. How can we compare the jet aircraft, automatic machine tools, frozen foods and plastic artifices of today with their counterparts (if any) of 10 or 20 years ago? Will not similar changes occur in the future?

Unfortunately, expenditures are not made

in dollars of constant purchasing power. Therefore, the degree of accuracy which can be attached to measures of growth trends depends in part upon the validity of the adjustments for price changes and variations in product-mix. These difficulties cannot be handled in a completely satisfactory manner. Even the estimates of productivity—output per worker for the entire economy—are derived from estimates of production divided by the work force and are heavily dependent upon the price indexes which are used to “deflate” the dollar amounts of products. These difficulties, of course, loom largest when data for years far in the past are examined. Partly this is because changes in quality and product mix are greater, but it is also because the data available for such periods often is quite sparse.

All of these cautionary remarks do not suggest that the projections of economic growth are completely meaningless. Rather they indicate a need to use such projections only as broad guidelines as to potentials. Probably we should not be quick to lament a slowdown in growth or hail an acceleration unless it is quite marked and sustained.

Secondly, although broad projections may help in the formulation of public policy decisions which are concerned with the total income of the nation, they may not provide much help to the individual businessman or consumer who operates in a more limited sphere. An estimate of the gross national product for 1970, or some other year, is merely a first step in planning. It offers to makers or sellers of particular goods or services only a rough approximation of the size of the economy determined by applying certain conventional estimating techniques. Evaluation of the prospects for a given region, industry or product comprises an additional substantial undertaking.

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